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NOTES ON THE MINOR GENERA OF THE
ERICACEAE.

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J. F. Klotzsch in "Linnaea" (Vol. 12) monographed the *Ericaceae* and described twenty-four new South African genera in the family, of which number N. E. Brown in the "Flora Capensis" retained thirteen and sunk the others in one or other of Klotzsch's remaining genera. Brown himself (*Flora Capensis*) described four further genera and retained five genera of older authors. The "Flora Capensis" thus recognised twenty-three genera of *Ericaceae* including the genus *Erica*. Brown in his key to the genera relied for his main groups on (1) the number of chambers in the ovary (2) the number of ovules in each ovary-chamber and (3) the number of stamens; within those groups he relied mainly on variations in the calyx, corolla, stamens, number of ovary-chambers and vegetative characters to separate the genera. In the genus *Erica* which is accepted as being a natural genus, the five sub-genera, as described in the "Flora Capensis", differ more among themselves in the shape of the calyx and corolla than do any of the other South African genera of the family and could be raised to generic rank with more justification than is warranted in the other genera. Yet so far as the writer has been able to ascertain only a few species of *Erica* have been placed in other genera, e.g. *Andromeda* Linn., *Microtrema* Klotz., *Macnabia* Benth., and *Nabia* Lehm., all of which except the first have been sunk in the genus *Erica*. In general appearance all the species in the twenty-two genera other than *Erica*, described in the "Flora Capensis" agree more among themselves in general appearance than do the species of *Erica*.

The writer considers that the number of ovules in the ovary-chamber,

i.e. whether solitary or two or more, is a more important character than the number of ovary-chambers. Many examples could be given from other families where the number of ovary-chambers varies in flowers from the same inflorescence. The number of stamens is also an unstable character as will be seen from the descriptions of the genera under consideration and as given in the "Flora Capensis".

In going through the genera in connection with the revision of "The Genera of South African Flowering Plants", all the available species of *Ericaceae* were dissected and examined. As a result of that examination, the writer is of opinion that not more than eight genera, including *Erica*, are justified to accommodate the South African species. The genera to be retained are :—

1. *Vaccinium* Linn.
2. *Erica* Linn.
3. *Blaeria* Linn. (*Philippia* Klotz.; *Ericinella* Klotz.; *Thamnus* Klotz.; *Coccosperma* Klotz.).
4. *Eremia* D. Don (*Platycalyx* N.E. Br.; *Hexastemon* Klotz.; *Arachnocalyx* Compton; *Grisebachia* Klotz.; *Acrostemon* Klotz.; *Simocheilus* Klotz.; *Thoracosperma* Klotz.; *Aniserica* N.E. Br.).
5. *Sympieza* Licht.
6. *Scyphogyne* Brongn. (*Syndesmanthus* Klotz.; *Anomalanthus* Klotz.; *Eremiopsis* N.E. Br.; *Leptericia* N.E. Br.).
7. *Salaxis* Salisb. (*Coilostigma* Klotz.).
8. *Lagenocarpus* Klotz.

It will be noted that the above grouping of the genera conforms to the grouping given in the Key to the genera in the "Flora Capensis". It is the separation of the genera within the groups which the writer does not think justified.

1. An examination of the genus *Blaeria* Linn. and the genera grouped with it, as given above, indicates that they cannot be separated on any tangible characters. In the genus *Coccosperma* Klotz. the number of stamens may be from 2 to 6; in *Ericinella* Klotz., from 4 to 6; in *Philippia* Klotz. the number of stamens is 8. In the genus *Thamnus* Klotz., the ovary is 1-chambered with several ovules; in *Coccosperma* Klotz., it is 1—3-chambered with 2 ovules in each chamber and in the other genera 4-chambered with 2 or more ovules in each chamber. The number of stamens, the number of ovary-chambers, and the number of ovules (2 or more) all vary and the genera in the group and as recognised in the "Flora Capensis" must be considered merely groups of species of one common genus. The question might legitimately be raised as to whether these genera can be separated from the genus *Erica*.

2. The genus *Eremia* D. Don and the genera grouped under it as above are all characterised by having a single ovule in each ovary-chamber. The number of ovary-chambers varies from 4 to 6. In *Eremia* the number of stamens is 8; in *Platycalyx* there may be 5 to 7; in *Hexastemon* the number is 6, while the other genera all have 4 stamens. The stigma in all is simple or sometimes slightly sub-capitate or sub-peltate.

3. The genus *Sympieza* Licht. is so distinct from any of the other genera owing to the flattened and 2-lobed calyx and the 2-lobed corolla that the writer suggests it should remain.

4. The genus *Leptericia* is separated by N. E. Brown from *Scyphogyne*, *Syndesmanthus* and *Anomalanthus* on the presence of 8 stamens in *Leptericia* and from 2 to 5 in the other genera. The 1-chambered ovary with a single ovule is the character which should unite these genera and the number of stamens or any other character may be used in separating the genus, in this case *Scyphogyne*, into subgenera or sections.

5. N. E. Brown in the Key to the genera (*Flora Capensis*) separates the genera *Salaxis* and *Coilostigma* on the number of stamens. In *Salaxis* the number may vary from 6 to 9 whereas in *Coilostigma* the number of stamens is 4. As we know from the other genera in the *Ericaceae*, the number of stamens is variable, and it is not a reliable character on which to separate *Coilostigma* from *Salaxis*.

6. The peculiar floral character found in *Lagenocarpus* Klotz. of the ovary being inferior to the corolla and not to the calyx as pointed out by N. E. Brown in the "Flora Capensis", would warrant it being kept distinct from all the other genera.

The genera as suggested above, can be keyed out as follows :—

KEY TO THE GENERA :

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|--|-------------------------------|----|
| 1. Leaves broad, lanceolate, serrate | 1. <i>Vaccinium</i> Linn. | 2 |
| Leaves ericoid | | 2 |
| 2. Ovary adnate to the corolla-tube | 8. <i>Lagenocarpus</i> Klotz. | 3 |
| Ovary superior, free from the corolla-tube | | 3 |
| 3. Ovule solitary in each ovary-chamber | | 4 |
| Ovules 2 or more in each ovary-chamber | | 7 |
| 4. Ovary 1-chambered | 6. <i>Scyphogyne</i> Brongn. | 5 |
| Ovary 2- or more-chambered | | 5 |
| 5. Calyx of lowest or of all flowers flattened, 2-lobed; corolla 2-lobed | 5. <i>Sympieza</i> Licht. | 6 |
| Calyx not as above; corolla 4-lobed (rarely 2-lobed) | | 6 |
| 6. Stigma peltate, cup-shaped, or saucer-shaped | 7. <i>Salaxis</i> Salisb. | .. |
| Stigma simple (rarely sub-peltate, in which case bracts are present) | 4. <i>Eremia</i> D. Don | .. |
| 7. Calyx-lobes usually unequal; if equal then stamens normally 4 | 3. <i>Blaeria</i> Linn. | .. |
| Calyx lobes equal; stamens normally 8 | 2. <i>Erica</i> Linn. | .. |

AMENDED DESCRIPTIONS OF SOME GENERA.

Blaeria Linn., Sp. Pl., ed. 1, p. 112 (1753).

Calyx sometimes with a campanulate tube ; lobes or segments 3—4, often unequal. *Corolla* longer or scarcely as long as the calyx ; tube campanulate, tubular-campanulate, or tubular, often angled ; lobes 3—4, much shorter than the tube. *Stamens* 2—8, exserted or included ; filaments sometimes membranous or more or less rigid, linear or filiform, free or connate ; anthers shorter or longer than the filaments, free or connate, often spurred at the base, often minutely tuberculed, opening by oblique pores or slits, with the thecae divided to the base or almost so. *Ovary* 1—4-chambered, with 2—5, rarely more, ovules in each chamber ; style cylindric, usually exserted ; stigma simple, sub-capitate, peltate, or saucer-shaped. *Fruit* a 2—4-valved loculicidal capsule, sometimes unilocular, with 1 to few seeds in each loculus.

Shrubs or shrublets ; leaves ericoid, usually convex and grooved on the back, rarely open-backed ; inflorescence various ; flowers normally small ; bracts 2—3 or 0.

Eremia D. Don in Edinburgh New. Phil. Journ., vol. 17, p. 156 (1834).

Calyx lobed or partite almost to the base, rarely nearly flat and square in outline ; tube when present campanulate or tubular campanulate, sometimes angled or ribbed ; lobes or segments 4, shorter than the tube. *Corolla* slightly exceeding or much longer than the calyx ; tube urceolate, campanulate, cup-shaped, sub-globose, or tubular, often angled ; lobes 4, very rarely only 2, much shorter than the tube. *Stamens* 4—8, free, exserted from or included in the corolla ; filaments linear or filiform ; anthers 2-lobed or divided to the base, sometimes spurred, sometimes tuberculate or hirsute. *Ovary* 2—4-chambered, with 1 pendulous ovule in each chamber ; style cylindric or filiform, usually exserted ; stigma simple, sub-capitate, or sub-peltate, or minutely 4-lobed.

Small shrubs or shrublets ; leaves ericoid, convex and grooved on the back, rarely flat ; flowers small, in terminal clusters or on short lateral branchlets or in few-flowered globose heads, or 1—6 together ; bracts 1—3, sometimes absent.

Scyphogyne Brongn. in Duperrey Bot. Voy. Coquille, t. 54 (1829).

Calyx-tube campanulate or funnel-shaped, sometimes angled ; lobes 3—4, about as long as or much shorter than the tube. *Corolla* shorter or longer than the calyx ; tube campanulate, tubular, funnel-shaped or tubular or cylindric below and campanulate or globose above ; lobes

3—4, much shorter than the tube. *Stamens* 3—8, included or exserted ; filaments sometimes membranous and connate or linear and free ; anthers longer than the filaments, notched at the apex or bipartite to the base, with or without spurs, rarely with the connective produced and fleshy and glandular, opening by oblique pores or slits. *Ovary* 1-chambered, with a solitary pendulous ovule ; style cylindric or linear, as long as the stamens or sometimes exserted ; stigma simple, capitate or thickened or large and peltate or crater-like.

Small shrubs or shrublets ; leaves ericoid, convex and grooved on the back ; flowers very small, 1—3 together, axillary and terminal or several in small globose heads, sessile or shortly pedicellate ; bracts 1—3 or 0.

Salaxis Salisb., Trans. Linn. Soc., vol. 6, p. 317 (1802).

Calyx divided almost to the base or with a saucer-shaped tube ; lobes 4, unequal. *Corolla* shorter or longer than the calyx, often hairy ; tube globose, urceolate, ovoid, cylindric, or campanulate ; lobes 4, shorter than the tube. *Stamens* usually 4 or 8, more rarely 6 or 9, included or slightly exserted, often forming a ring within the corolla ; filaments linear or sometimes membranous and oblong, variously connate or free ; anthers lobed above or divided almost to the base, without spurs, opening by oblique slits or pores. *Ovary* 2—4-chambered, sometimes angled, with a solitary ovule in each chamber ; style shorter than the stamens or exserted, sometimes becoming lateral in the fruit owing to the abortion of an ovary-chamber ; stigma sometimes small, usually large, peltate, crater-like cup-shaped or saucer-shaped, sometimes completely covering the mouth of the corolla-tube. *Fruit* apparently indehiscent.

Small shrubs or shrublets ; leaves ericoid, convex and grooved on the back ; flowers small, often in small clusters ; bracts present or absent.